

Appln. No. 10/500,991
Amendment
Reply to Office Action dated September 9, 2005

Docket No. 6300-13

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for determining the minimal cost path between two points (A,B), via a transport network comprising a plurality of nodes (P_n) which are connected in pairs by segments, ~~wherein the method comprising the steps of:~~

- ~~attributing a cost is attributed~~ to each segment of the network;
- ~~developing a two path graphs is developed~~, substantially starting from ~~at least one of the~~ two points (A,B); and
- ~~the minimal cost path which connects the two points (A,B) is determined, the method being characterised in that~~
- ~~two path graphs are developed, substantially starting from two points (A,B) respectively;~~
- ~~interrupting the development of the two path graphs is interrupted~~ when they comprise at least one first common interference node (P_1);
- ~~the determining two minimal cost paths belonging respectively to the two path graphs are determined; and~~
- ~~the connecting said two minimal cost paths are connected~~ in order to obtain the a minimal cost path ~~between~~ connecting the said two points (A,B).

2. (Currently amended) Method according to claim 1, wherein, in the case when at least one of the said two points (A,B) is situated substantially at the location of a node, the ~~corresponding path graph [[is]]~~ corresponding to said at least one of said two points is developed starting from the said node.

3. (Currently amended) Method according to claim 1, wherein, for at least one of the said two points (A,B), at least two adjacent nodes ($P_{A,n}$, $P_{A,n+1}$) of the said ~~point (A)~~ at least one (A)

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of said two points are sought, a non-zero basic cost is attributed to each of these two nodes ($P_{A,n}$, $P_{A,n+1}$), and a single graph is developed starting from these two nodes ($P_{A,n}$, $P_{A,n+1}$).

4. (Currently amended) Method according to claim 3, wherein since the two nodes ($P_{A,n}$, $P_{A,n+1}$) form a segment on which the point (A) at least one (A) of said two points is substantially situated, ~~the~~ a basic cost of each node ($P_{A,n}$, $P_{A,n+1}$) is determined by proportionality starting from the cost of the segment between these two nodes ($P_{A,n}$, $P_{A,n+1}$).

5. (Currently amended) Method according to claim 1, wherein:

- the segments are classified according to a plurality of network levels;
- during the development of at least one of the two graphs, the number of segments of the graph ~~which belong to the~~ of a lowest level m_{inf} is calculated; and
- starting from a predefined threshold of number of segments of level m_{inf} , ~~the said at least one of the two path graphs~~ is developed taking into account only the segments which belong to the levels which are strictly higher than the level m_{inf} .

6. (Currently amended) Method according to claim 5, wherein:

- during the development of the two path graphs, the number of segments of each graph ~~which belong to the~~ of the lowest level m_{inf} is calculated; and
- when the number of segments of level m_{inf} has reached ~~the said predefined~~ threshold for the two path graphs, the development of the two graphs is continued, taking into account only the segments which belong to the levels which are strictly higher than the level m_{inf} .

7. (Currently amended) Method according to claim 5, wherein the development of ~~the~~ said at least one of the two path graphs is started by taking into account ~~all~~ each of the segments which belong to all of the levels of the network.

8. (Previously presented) Method according to claim 1, wherein:

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- a group of successive segments with a given level m is sought, comprising exclusively intermediate nodes which do not belong to any segment with a level which is at least equal to m , other than those of the group of successive segments with the level m concerned; and
- the group of successive segments is substituted by a single segment with a level m .

9. (Previously presented) Method according to claim 1, wherein each graph is developed in a globally concentric manner.

10. (Currently amended) Method according to claim 9, wherein the said two path graphs are developed by using a bucket algorithm.

11. (Previously presented) Method according to claim 1, wherein the said two path graphs are developed simultaneously.

12. (Currently amended) Method according to claim 1, wherein, having found the said first common interference node (P_1), ~~the~~ an optimal interference node (P_{io}) is sought from amongst the nodes already analysed, in order to determine the two minimal cost paths which contain the said optimal interference node (P_{io}).

13. (Previously presented) Road navigation aid server for implementation of the method according to claim 1, comprising an interface for connection to a communication network, a block for receipt of requests from client terminals, a block for receipt of road network data, a block for classification of road segments, a block for creation of a virtual road network, a block for labelling of road segments, a calculation module and a transmission block.

14. (Previously presented) Server according to claim 13, wherein the calculation module comprises a graph development block, a block for detection of a change of level of segments, and a block for determination of the minimal cost path.

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